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**RACEWAY AND BOXES FOR ELECTRICAL SYSTEMS**

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**1. GENERAL**

**1.1 Section Includes**

- .1 Materials and installation for cable splice and junction boxes.

**1.2 References**

- .1 Canadian Standards Association (CSA)
  - .1 CSA C22.2 No.40, Cutout, Junction and Pull Boxes.

**1.3 Product Data**

- .1 Submit product data in accordance with Section 01 33 00 - Submittal Procedures.

**2. PRODUCTS**

**2.1 Splice Boxes**

- .1 Splice boxes cast iron enclosures 6.4mm thick painted with chromate primer and gray enamel to provide mechanical protection and moisture seal for direct buried cable splices rated 3 kV and consisting of:
  - .1 Two halves, split along cable axis, finely ground matching surfaces, fastened with silicon bronze, galvanized steel bolts, top half with large filling holes with gasketed plugs for medium hard asphalt base compound, bottom half with screws on inside for bonding armour, and box end openings sealed by:
    - .1 Wrapping cables with anhydrous tape and clamping to make snug fit, for 3 and 4 way splices.
    - .2 Fitting boxes with cable entrance fittings suitable for neoprene interlocking armour sheaths, for 3 and 4 way splices.

**2.2 Junction Boxes Power Level**

- .1 Cast iron octagonal box painted with chromate primer and gray enamel with joints ground smooth and fitted with gasket, contacts mounted on porcelain supports to which conductors are fastened by soldered-on lugs, medium hard asphalt compound filled, suitable for 3 phase, 15 kV cable, 250 MCM maximum cable size, with stuffing box entrance.
- .2 Welded steel rectangular boxes, oil resistant gasketed steel plate lids fastened with silicon-bronze bolts, shot blasted and painted with chromate primer and gray enamel, cableheads medium hard asphalt compound filled capnut sealed potheads with stuffing box entrances, oil filled, air filled, disconnecting links insulated switch stick operated at no voltage rated 250A at 15,000 V, 3 way for wall mounting.

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**3. EXECUTION**

**3.1 Installation**

- .1 Install splice boxes at cable joint, on floor. Tighten armour clamps and fill with compound.
- .2 Install junctions boxes on trench floor around cable splice to CSA C22.2 No.40. Connect cable terminals to box contacts. Fasten lid securely and check for air leaks before trench is backfilled.
- .3 Install subway level steel boxes on wall. Connect cables to bus, install links, fasten lid and test for air leaks, fill with compound.
- .4 Install distribution level steel boxes on walls. Splice main cable in box and connect branch feeder. Fasten cover and fill with compound.
- .5 Install power level boxes as follows:
  - .1 Cast iron type: on trench floor, connect cable terminals to box contacts, fasten lid and fill with compound before trench is backfilled.
  - .2 Steel type: mount on wall of manhole; connect cables to box terminals; install disconnect links, fasten lid securely, check for air leaks.

**END OF SECTION**